1 INTRODUCTION

This document is the sampling and analysis plan (SAP) for the remedial investigation and feasibility study (RI/FS) of Little Squalicum Park (the Park) located in Bellingham, Washington (Figure 1-1). This SAP describes the sampling strategy and design to meet the data needs of the RI/FS and provides specific guidance for field methodology and quality assurance procedures that will be followed by Integral Consulting, Inc. (Integral) and its subcontractors. Integral is conducting this work under contract No. 2004-014 with the City of Bellingham, Parks and Recreation Department (City), with direction from both the Washington State Department of Ecology Toxics Cleanup program (Ecology) and U.S. Environmental Protection Agency, Region 10 Brownfields program (EPA).[1] This SAP has been prepared for RI sampling and analysis activities in general accordance with Washington Administrative Code (WAC) 173-340-820, WAC 173-204-600, and the Sediment Sampling and Analysis Appendix, as updated (Ecology 2003).

Several documents are cited repeatedly and accompany this SAP. Altogether, these documents are referred to as the Work Plans for the Park RI/FS:

- *Work Plan for the RI/FS of Little Squalicum Park Bellingham, Washington.* The Work Plan describes program objectives, project organization, and project tasks to complete an RI/FS of the Park. This document also provides information on project background, history, and regulatory framework.
- *Quality Assurance Project Plan (QAPP) of Little Squalicum Park RI/FS Bellingham, Washington.* The QAPP describes laboratory methodology and quality assurance/quality control (QA/QC) procedures that will be used to complete a RI/FS for the Park site.
- *Project Health and Safety Plan, Little Squalicum Park RI/FS, Bellingham, Washington. (HASP).* The HASP has been prepared in conformance with Integral's Health and Safety Plan guidelines and in accordance with WAC 173-340-810, applicable Washington Industrial Safety and Health Act (WISHA) regulations, and project requirements. It addresses those activities associated with work to be performed in the Park.
- *Integral Standard Operating Procedures* (SOPs). These numbered documents provide specific, detailed information on conducting routine, repetitive field techniques (e.g., split spoon sampling from a drill rig). These documents are found in Appendix A.

[1] Funding for this work was received by the City of Bellingham (2004) from the EPA Brownfields Program. Additional funding is expected from the Ecology Remedial Action Grant Program (City of Bellingham 2005).

The Whatcom County Health and Human Services completed a site hazard assessment (SHA) of the Park site in February 2004, as required under the Model Toxics Control Act (MTCA). The site's hazard ranking, an estimation of the potential threat to human health and/or the environment relative to other Washington State sites assessed at that time, was determined to be a 1, where 1 represents the highest relative risk and 5 the lowest (Ecology 2004). Based on the results of the SHA, Ecology has determined that a RI/FS should be developed for the Park site pursuant to WAC 173-340-350 and WAC 173-204-560. Ecology has negotiated an *Agreed Order* and Statement of Work (SOW) (dated March 22, 2005) with the City to conduct an RI/FS on the Park site (presented in Attachment A of the Work Plan). The RI/FS is intended to provide sufficient data, analysis, and evaluations to enable Ecology to select a cleanup action alternative for the site.

The primary objectives of the Park RI/FS are to provide critical data necessary to understand the nature and extent of environmental problems at the site, to assess potential risk to human health and the environment, to determine if cleanup actions are required, and to determine how these actions may be accomplished as part of specific wildlife enhancement and park development actions. These objectives will be met by sampling surface water, groundwater, soil and sediments and evaluating the results in concert with other existing data. Other major project objectives are provided in the accompanying Work Plan.

Several historical studies have been completed within the boundaries of the Park. Section 2 presents a review of existing data, including a summary of previous investigations and screening level criteria, a preliminary conceptual site model (CSM), and data gaps. Section 3 presents the sampling design and rationale for a tiered approach to complete the Park RI field and testing investigation. The overall sampling strategy for the Park is to place a greater density of sampling locations in areas for which little or no historical data are available and to limit the analyte list in well-studied areas by applying a tiered sampling and testing approach. An adequate volume of sample will be archived to allow analysis of all analytes for a given medium (including biological toxicity testing), if necessary. Section 4 discusses field methods for sample collection and sample handling methods. References are presented in Section 5. Referenced figures and tables are presented at the end of each section.

Appendix A contains Integral SOPs and field forms, and Appendix B contains the historical biological testing results for the site.